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| 10/564,333 | 01/11/2006 | Wlfrid Hofmann | VBW 5664 | 9117 |
| 321 7590 03/06/2009 SENNIGER POWERS LLP 100 NORTH BROADWAY 17TH FLOOR ST LOUIS, MO 63102 | | | | |
| EXAMINER GREENE, JASON M | | | | |
| ART UNIT | | PAPER NUMBER | | |
| 1797 | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspatents@senniger.com

Office Action Summary

Application No.

10/564,333

Applicant(s)

HOFMANN, WILFRIED

Examiner

Jason M. Greene

Art Unit

1797

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 32-64 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 32-50 and 63 is/are allowed.
- 6) ☒ Claim(s) 51, 53-62 and 64 is/are rejected.
- 7) ☒ Claim(s) 52 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

Response to Arguments

1. Applicant's arguments, see page 8, lines 2-6, filed 20 November 2008, with respect to the objections and 35 USC 112, second paragraph rejections of claims 33-62 have been fully considered and are persuasive. The objections and 35 USC 112, second paragraph rejections of claims 33-62 have been withdrawn.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 51, 53, 55-59, 61, 62 and 64 are rejected under 35 U.S.C. 102(e) as being anticipated by Tai et al. (US 6,622,872 B1).

Tai et al. discloses a filter element with a membrane layer (140) and a carrier layer (120), where the membrane layer has a plurality of perforations (see Fig. 1E), wherein the carrier layer a membrane chamber is exposed (not numbered, see Fig. 1C), the membrane layer spans over the membrane chamber, and the membrane layer material has an at least partially microcrystalline structure (since it is CVD deposited silicon nitride) with strength that by a treatment (coating with Parylene) has been increased over that of the membrane layer material prior to the treatment, wherein the membrane chamber is rectangular in plan view and has a length at least twice its width (see Fig. 3B), wherein two oppositely lying sides of the membrane chamber run at an angle of less than 90 degrees to the plane of the membrane (see Fig. 3D), wherein the pore ratio of the thickness D ($0.5\text{-}1\text{ }\mu\text{m}$) of the membrane and the pore diameter P ($6\text{-}13\text{ }\mu\text{m}$) have the relationship $0.01 < D/P < 100$, wherein the pores (holes) are essentially circular shape and have a diameter between 6 and 13 μm (see col. 1, lines 35-41), wherein the membrane chamber essentially extends over the entire area of the filter element, and wherein the carrier is silicon in Figs. 1A-3D and col. 1, line 35 to col. 3, line 31.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 54 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tai et al. (US 6,622,872 B1).

With regard to claim 54, Tai et al. does not disclose the carrier substrate (layer) having a plurality of membrane chambers, each of which is spanned over and by the same membrane layer. However, one of ordinary skill in the art at the time the invention was made would have recognized that multiple membrane chambers could be formed in that duplicating parts is merely a choice of design. See *St. Regis Paper Co. v. Bemis Co., Inc.*, 193 USPQ 8, 11. Additionally, multiple separate membrane chambers could be formed to increase the mechanical strength of the carrier layer or the provide additional support for the membrane layer.

With regard to claim 60, Tai et al. does not teach using an intermediate support, but one of ordinary skill in the art at the time the invention was made would have recognized that multiple support layers could be formed in that duplicating parts is merely a choice of design. See *St. Regis Paper Co. v. Bemis Co., Inc.*, 193 USPQ 8, 11.

Allowable Subject Matter

6. Claims 32-50 and 63 are allowed.

7. Claim 52 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

With regard to claim 52, the prior art made of record does not teach or fairly suggest the filter element of claim 51 wherein the increased strength of the membrane layer is produced through an internal mechanical prestress.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Greene whose telephone number is (571) 272-1157. The examiner can normally be reached on Monday - Friday (9:00 AM to 5:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jason M. Greene
Primary Examiner
Art Unit 1797

/Jason M. Greene/
3/1/09

jmg
March 1, 2009